

CLAIMS:

1. An apparatus for applying an electrical charge to a member to be charged, comprising:

a contact roll member situated spaced from a surface of the member to be charged; and

means for applying an electrical bias to said contact roll member, the electrical bias including an oscillating voltage signal which is clipped to remove a selected polarity component thereof to supply a single polarity oscillating input drive voltage to said contact roll member.

2. The apparatus of claim 1, wherein the electrical bias applying means includes means for applying a DC offset to the oscillating voltage signal.

3. The apparatus of claim 1, wherein the electrical bias applying means includes:

a high voltage power supply for providing a DC offset AC voltage signal;
a diode element coupled to the high voltage power supply for preventing current flow associated with a positive component of the DC offset AC voltage signal; and

a resistor element coupled between the diode element and a ground point for allowing current flow associated with a positive component of the DC offset AC voltage signal to flow to ground.

4. The apparatus of claim 3, wherein the high voltage power supply provides at least a 1.6 Kvolt AC voltage signal at a frequency of 400 to 3000 Hz and a DC offset of between -350 and -800 volts.

5. The apparatus of claim 1, wherein the electrical bias applying means includes:

a high voltage power supply for providing a DC offset AC voltage signal;
and

a rectifier circuit for preventing current flow associated with a positive component of the DC offset AC voltage signal.

6. The apparatus of claim 1, wherein the member to be charged is a photoreceptive member having a photoconductive surface layer.

7. The apparatus of claim 1, wherein the oscillating voltage signal is in the form of a sinusoidal waveform.

8. The apparatus of claim 1, wherein charging device is spaced 20 to 50 microns from the imaging surface.